



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/748,167	12/31/2003	Dong-Shin Jung	Q77527	6951
23373 7590 06/08/2011				
SUGHRUE MION, PLLC				
2100 PENNSYLVANIA AVENUE, N.W.				
SUITE 800				
WASHINGTON, DC 20037				
EXAMINER				
ALVESTIEFFER, STEPHEN D				
ART UNIT		PAPER NUMBER		
2171				
NOTIFICATION DATE		DELIVERY MODE		
06/08/2011		ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

sughrue@sughrue.com  
PPROCESSING@SUGHRUE.COM  
USPTO@SUGHRUE.COM

### Office Action Summary

**Application No.**

10/748,167

**Applicant(s)**

JUNG ET AL.

**Examiner**

STEPHEN ALVESTEFFER

**Art Unit**

2171

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 January 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 20081016
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

In view of the Board Decision filed on January 14, 2011, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

A Technology Center Director has approved of reopening prosecution by signing below:

Claims 1, 2, 7, 12, 15, 20 and 25 are independent. Claims 1-27 remain pending.

The Information Disclosure Statement (IDS) filed October 16, 2008 was considered by the examiner.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 6-8, 10-13, 15-22, and 24-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Hendricks et al. (hereinafter Hendricks), United States Patent 7,743,330.

**Regarding claim 1**, Hendricks teaches an apparatus for providing object-in-content information (see Hendricks Figure 1, showing that the specific virtual object is

provided by the object delivery center 15 to the reception site 30), managed by an object-in-content information managing device (see Hendricks Figure 1, object delivery center 15 transmits virtual objects for insertion into content), comprising:

a central control unit operable to receive content, supply basic content information of the content, and provide the object-in-content information in a user-viewable format (see Hendricks Figure 1; see also Hendricks column 2 lines 64-68, *"Content, virtual objects, and associated targeting/virtual object placement control can be relayed to reception sites and information extracted from the reception site. The reception site may reside within a digital cable set top box that has access to a delivery network. Alternately, the reception site may be components of digital television satellite receivers. The reception site may be incorporated into the circuitry of a television, thereby eliminating the need for a separate control device attached to the television."*, wherein the reception site 30 is a central control unit operable to receive content 36; see also Hendricks column 2 lines 43-53, *"The reception site stores information indicating that a virtual object was inserted. The accumulated history information may be collected from the reception site at a later time for review purposes. The unique reception site identification information may also be provided with the collected data."*, the reception site 30 collects and supplies basic content information of the content to delivery net 13; see also Hendricks column 2 lines 37-42, *"After the reception site receives and stores the virtual objects, the reception site will place the virtual objects into virtual object locations. The placement may be based on virtual objects watched data and other user information. The reception site, or terminal, will display the combined content with the*

*overlaid or embedded virtual object.*”, wherein the reception site 30 provides virtual objects combined with content 36 in a user-viewable format); and

an object information interface unit (see Hendricks Figure 1, reception site 30 interface) operable to transmit a request message including the basic content information to the object-in-content information managing device (see Hendricks Figure 1, showing “viewing information” that equates to the basic content information; see also Hendricks column 1 lines 59-63, “*a viewer may select an object and the selection will initiate a process whereby a reception site sends a command to a location designated by the interactive virtual object to initiate some action*”; see also Hendricks column 4 lines 47-50, “*The local data collection center 40 provides information collected from the reception site 30 to the local insertion center 20 to assist in the targeting of virtual objects*”; see also Hendricks column 5 lines 44-51, “*Virtual objects may be interactive in nature, where a viewer can select a virtual object 35 and this selection will initiate a process whereby the reception site 30 sends a command to the location designated by the interactive virtual object 38 to initiate some action. Actions may include linking to a Web site to display content related to the interactive virtual object 38, initiating a purchase transaction, or initiating a request for more information about the selected virtual object 38.*”; see also Hendricks column 9 lines 35-39, “*delivery of TVOMS-related subscriber-specific information and commands*”), receive a response message including the object-in-content information corresponding to the basic content information from the object-in-content information managing device (see Hendricks column 5 lines 30-42, “*Combining these technologies, a soda can may be synthetically placed in the video,*

*and may then be made to change over time. This placement and subsequent modification can occur at the video's source, at an intermediate point within the distribution and delivery path, or at the reception site 30. Combining the placement of virtual objects with the ability to target specific virtual objects to specific viewers or groups of viewers allows one household to see a scene with the soda can for cola, while the next door neighbor sees a root beer soda can, for example";* see also Hendricks column 12 line 65 through column 13 line 7, *"After the reception site 30 receives and stores the virtual objects and the retrieval plan, the reception site 30 inserts those virtual objects into the appropriate virtual object locations in the content 36 based on the retrieval plan. The reception site 30 may retrieve and store only those virtual objects associated with that reception site's group assignment for that virtual object location 37",* reception site 30 receives content including the virtual objects corresponding to the viewing information from the object delivery center 15), and transmit the object-in-content information included in the response message to the central control unit (see Hendricks Figures 2-4, showing the specific virtual objects on the content as video programming),

wherein the received content is not received through the object-in-content information managing device (see Hendricks Figure 1; see also Hendricks column 1 line 64 through column 2 line 10, *"An object delivery center serves as a standalone or supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated"*).

**Regarding claim 2**, Hendricks teaches an apparatus for providing object-in-content information of content (see Hendricks Abstract, *"A method and an apparatus are used to place virtual objects in video programs"*; see also Hendricks Figure 1; see also Hendricks column 1 lines 40-63, *"A system and a method delivers virtual objects to reception sites or terminals. A virtual object may be a realistic, synthetic replica of an actual object. The virtual object is viewable within video programming and may be combined with original video and audio to supplement or replace portions of the original video and audio content."*, wherein the object-in-content is the specific virtual object placed within the video programming), comprising:

a basic content information converting unit operable to receive a message including basic content information of the content and provide converted basic content information corresponding to the basic content information (see Hendricks column 12 lines 41-64, *"The selected virtual object locations 37 may include all virtual object locations, or a subset of all the virtual object locations. Assignment of a reception site 30 to a group for the appropriate virtual objects may be based on a detailed retrieval plan. The retrieval plan may provide information for one virtual object location 37 or multiple virtual object locations within content 36, where one or more virtual objects, target categories, and the groups to which each virtual object 38 is targeted within each virtual object location 37 is also provided. An example retrieval plan is provided in Table C below. Alternatively, the retrieval plan providing virtual object assignments to virtual object locations may be sent independently from the retrieval plan providing virtual objects, target categories, and the groups to which each virtual object 38 may be*

*targeted. Retrieval plans may be distributed along with the virtual objects and the associated content 36 directly to the reception sites by the delivery processor 1300 or using the object delivery center 15. Alternatively, a retrieval plan may be distributed by the delivery processor 1300 or using the object delivery center 15 independent of the associated content 36 or virtual objects.*", the object delivery center 15 provides a retrieval plan along with virtual objects to the reception site 30. The retrieval plan is formulated based on viewing information and equates to the converted basic content information.);

a storage unit operable to store the object-in-content information (see Hendricks Figure 1, showing the object delivery center 15 for storing the virtual objects and their information);

an information search unit operable to extract the object-in-content information stored in the storage unit by using the converted basic content information (see Hendricks column 12 lines 41-64, virtual objects are extracted based on the retrieval plan); and

an object information transmitting unit operable to generate a response message including the object-in-content information provided by the information search unit and transmit the response message to a central control unit (see Hendricks Figure 1, showing the object delivery center 15 transmitting the virtual objects to the reception site 30),

wherein the object information transmitting unit does not transmit the content to the central control unit (see Hendricks Figure 1, showing that the object delivery center



15 does not transmit the content to the reception site 30. Instead, the operations center 10 or local insertion center 20 transmit content to the reception site 30).

**Regarding claim 3**, Hendricks teaches that the basic content information converting unit receives the message (see Hendricks column 1 lines 59-63; see also Hendricks column 4 lines 47-50; see also Hendricks column 5 lines 44-51; see also Hendricks column 9 lines 35-39, showing all the subscriber information sends to the TVOMS 300), transmits the basic content information to a unit that provides the content (see Hendricks, TVOMS 300), receives the converted basic content information from the unit and provides the converted basic content information (see Hendricks column 12 lines 41-64, the retrieval plan is received and delivered by the object delivery center 15).

**Regarding claim 6**, Hendricks teaches that the converted basic content information comprises one of actual coordinates, a relative time, a content identifier, or a combination thereof (see Hendricks column 12 lines 41-64, "*The selected virtual object locations 37 may include all virtual object locations, or a subset of all the virtual object locations. Assignment of a reception site 30 to a group for the appropriate virtual objects may be based on a detailed retrieval plan. The retrieval plan may provide information for one virtual object location 37 or multiple virtual object locations within content 36, where one or more virtual objects, target categories, and the groups to which each virtual object 38 is targeted within each virtual object location 37 is also provided. An example retrieval plan is provided in Table C below. Alternatively, the*

*retrieval plan providing virtual object assignments to virtual object locations may be sent independently from the retrieval plan providing virtual objects, target categories, and the groups to which each virtual object 38 may be targeted. Retrieval plans may be distributed along with the virtual objects and the associated content 36 directly to the reception sites by the delivery processor 1300 or using the object delivery center 15. Alternatively, a retrieval plan may be distributed by the delivery processor 1300 or using the object delivery center 15 independent of the associated content 36 or virtual objects.”*, The retrieval plan is used to determine which virtual objects to retrieve based on viewing information, as shown in Hendricks Figure 1. A content identifier is determined using the retrieval plan to identify specific virtual objects to use).

**Regarding claim 7**, Hendricks teaches a system for providing object-in-content information of content (see Hendricks Abstract, “*A method and an apparatus are used to place virtual objects in video programs*”; see also Hendricks Figure 1; see also Hendricks column 1 lines 40-63, “*A system and a method delivers virtual objects to reception sites or terminals. A virtual object may be a realistic, synthetic replica of an actual object. The virtual object is viewable within video programming and may be combined with original video and audio to supplement or replace portions of the original video and audio content.*”, wherein the object-in-content is the specific virtual object within the video programming), comprising:

an apparatus for providing the object-in-content information (see Hendricks Figure 1, showing that the specific virtual object is provided by the object delivery center 15 to the reception site 30), which comprises:

a central control unit operable to receive the content, supply basic content information of the content, and provide the object-in-content information in a user-viewable format (see Hendricks Figure 1; see also Hendricks column 2 lines 64-68, *"Content, virtual objects, and associated targeting/virtual object placement control can be relayed to reception sites and information extracted from the reception site. The reception site may reside within a digital cable set top box that has access to a delivery network. Alternately, the reception site may be components of digital television satellite receivers. The reception site may be incorporated into the circuitry of a television, thereby eliminating the need for a separate control device attached to the television."*, wherein the reception site 30 is a central control unit operable to receive content 36; see also Hendricks column 2 lines 43-53, *"The reception site stores information indicating that a virtual object was inserted. The accumulated history information may be collected from the reception site at a later time for review purposes. The unique reception site identification information may also be provided with the collected data."*, the reception site 30 collects and supplies basic content information of the content to delivery net 13; see also Hendricks column 2 lines 37-42, *"After the reception site receives and stores the virtual objects, the reception site will place the virtual objects into virtual object locations. The placement may be based on virtual objects watched data and other user information. The reception site, or terminal, will display the combined content with the*

*overlaid or embedded virtual object.*”, wherein the reception site 30 provides virtual objects combined with content 36 in a user-viewable format);

an object information interface unit (see Hendricks Figure 1, showing the reception site 30 interface); and

an object-in-content information managing device (see Hendricks Figure 1, object delivery center 15 transmits virtual objects for insertion into content), wherein:

the object information interface unit (see Hendricks Figure 1, reception site 30 interface) is operable to transmit a request message including the basic content information to the object-in-content information managing device (see Hendricks Figure 1, showing “viewing information” that equates to the basic content information; see also Hendricks column 1 lines 59-63, “*a viewer may select an object and the selection will initiate a process whereby a reception site sends a command to a location designated by the interactive virtual object to initiate some action*”; see also Hendricks column 4 lines 47-50, “*The local data collection center 40 provides information collected from the reception site 30 to the local insertion center 20 to assist in the targeting of virtual objects*”; see also Hendricks column 5 lines 44-51, “*Virtual objects may be interactive in nature, where a viewer can select a virtual object 35 and this selection will initiate a process whereby the reception site 30 sends a command to the location designated by the interactive virtual object 38 to initiate some action. Actions may include linking to a Web site to display content related to the interactive virtual object 38, initiating a purchase transaction, or initiating a request for more information about the selected virtual object 38.*”; see also Hendricks column 9 lines 35-39, “*delivery of TVOMS-related*

*subscriber-specific information and commands"), receive a response message including the object-in-content information corresponding to the basic content information from the object-in-content information managing device (see Hendricks column 5 lines 30-42, "Combining these technologies, a soda can may be synthetically placed in the video, and may then be made to change over time. This placement and subsequent modification can occur at the video's source, at an intermediate point within the distribution and delivery path, or at the reception site 30. Combining the placement of virtual objects with the ability to target specific virtual objects to specific viewers or groups of viewers allows one household to see a scene with the soda can for cola, while the next door neighbor sees a root beer soda can, for example"; see also Hendricks column 12 line 65 through column 13 line 7, "After the reception site 30 receives and stores the virtual objects and the retrieval plan, the reception site 30 inserts those virtual objects into the appropriate virtual object locations in the content 36 based on the retrieval plan. The reception site 30 may retrieve and store only those virtual objects associated with that reception site's group assignment for that virtual object location 37", reception site 30 receives content including the virtual objects corresponding to the viewing information from the object delivery center 15), and transmit the object-in-content information included in the response message to the central control unit (see Hendricks Figures 2-4, showing the specific virtual objects on the content as video programming), and wherein*

the object-in-content information managing device (see Hendricks Figure 1, object delivery center 15) comprises:

a basic content information converting unit operable to receive the request message and provide converted basic content information corresponding to the basic content information (see Hendricks column 12 lines 41-64, "*The selected virtual object locations 37 may include all virtual object locations, or a subset of all the virtual object locations. Assignment of a reception site 30 to a group for the appropriate virtual objects may be based on a detailed retrieval plan. The retrieval plan may provide information for one virtual object location 37 or multiple virtual object locations within content 36, where one or more virtual objects, target categories, and the groups to which each virtual object 38 is targeted within each virtual object location 37 is also provided. An example retrieval plan is provided in Table C below. Alternatively, the retrieval plan providing virtual object assignments to virtual object locations may be sent independently from the retrieval plan providing virtual objects, target categories, and the groups to which each virtual object 38 may be targeted. Retrieval plans may be distributed along with the virtual objects and the associated content 36 directly to the reception sites by the delivery processor 1300 or using the object delivery center 15. Alternatively, a retrieval plan may be distributed by the delivery processor 1300 or using the object delivery center 15 independent of the associated content 36 or virtual objects.*", the object delivery center 15 provides a retrieval plan along with virtual objects to the reception site 30. The retrieval plan is formulated based on viewing information and equates to the converted basic content information.),

a storage unit operable to store the object-in-content information (see Hendricks Figure 1, showing the object delivery center 15 for storing the virtual objects and their information),

an information search unit operable to extract the object-in-content information stored in the storage unit by using the converted basic content information (see Hendricks column 12 lines 41-64, virtual objects are extracted based on the retrieval plan),

an object information transmitting unit operable to generate the response message including the object-in-content information provided by the information search unit (see Hendricks Figure 1, showing transmitting by the delivery net 11/12 as sending the virtual objects to the reception site 30), and

wherein the received content is not received through the object-in-content information managing device (see Hendricks Figure 1; see also Hendricks column 1 line 64 through column 2 line 10, *"An object delivery center serves as a standalone or supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated"*).

**Regarding claim 8**, Hendricks teaches that the basic content information converting unit receives the request message (see Hendricks column 1 lines 59-63; see also Hendricks column 4 lines 47-50; see also Hendricks column 5 lines 44-51; see also Hendricks column 9 lines 35-39, showing all the subscriber information sends to the TVOMS 300), transmits the basic content information thereof to a unit that provides the

content (see Hendricks, TVOMS 300), receives the converted basic content information from the unit and provides the converted basic content information (see Hendricks column 12 lines 41-64, the retrieval plan is received and delivered by the object delivery center 15).

**Regarding claim 10**, Hendricks teaches that the converted basic content information comprises one of a relative time, a content identifier, actual coordinates, or a combination thereof (see Hendricks column 12 lines 41-64, *"The selected virtual object locations 37 may include all virtual object locations, or a subset of all the virtual object locations. Assignment of a reception site 30 to a group for the appropriate virtual objects may be based on a detailed retrieval plan. The retrieval plan may provide information for one virtual object location 37 or multiple virtual object locations within content 36, where one or more virtual objects, target categories, and the groups to which each virtual object 38 is targeted within each virtual object location 37 is also provided. An example retrieval plan is provided in Table C below. Alternatively, the retrieval plan providing virtual object assignments to virtual object locations may be sent independently from the retrieval plan providing virtual objects, target categories, and the groups to which each virtual object 38 may be targeted. Retrieval plans may be distributed along with the virtual objects and the associated content 36 directly to the reception sites by the delivery processor 1300 or using the object delivery center 15. Alternatively, a retrieval plan may be distributed by the delivery processor 1300 or using the object delivery center 15 independent of the associated content 36 or virtual*



*objects.*”, The retrieval plan is used to determine which virtual objects to retrieve based on viewing information, as shown in Hendricks Figure 1. A content identifier is determined using the retrieval plan to identify specific virtual objects to use).

**Regarding claim 11**, Hendricks teaches a content provider operable to provide the content (see Hendricks Figure 1, by the central data collection center 50 and operations center 10), receive the basic content information through a separate medium other than a medium providing the content (see Hendricks Figure 1, showing different path/route for requesting and receiving information), and provide the converted basic content information corresponding to the received basic content information through the separate medium (see Hendricks, the virtual objects are received through the object delivery center 15).

**Regarding claim 12**, Hendricks teaches a method of providing object-in-content information of content, the method comprising:

receiving the content (see Hendricks column 4 lines 20-37, “*A delivery network 11 includes any of a number of different delivery systems to support the delivery of the content 36 and virtual objects from the operations center 10 and the object delivery center 15 to a local insertion center 20 or directly to a reception site 30*”, the reception site 30 receives content from the delivery systems);

obtaining basic content information of the content (see Hendricks column 4 lines 38-57, “*The reception site 30 may collect virtual object viewing information and make*

*the viewing information available to a local data collection center 40 or a central data collection center 50 using a delivery network 13", the reception site 30 obtains virtual object viewing information. Virtual object viewing information equates to basic content information of the content.);*

transmitting a request message including the basic content information to an object-in-content information managing device (see Hendricks Figure 1, showing "viewing information" that equates to the basic content information, and "object delivery center 15" that equates to the object-in-content information managing device; see also Hendricks column 1 lines 59-63, "*a viewer may select an object and the selection will initiate a process whereby a reception site sends a command to a location designated by the interactive virtual object to initiate some action*"; see also Hendricks column 4 lines 47-50, "*The local data collection center 40 provides information collected from the reception site 30 to the local insertion center 20 to assist in the targeting of virtual objects*"; see also Hendricks column 5 lines 44-51, "*Virtual objects may be interactive in nature, where a viewer can select a virtual object 35 and this selection will initiate a process whereby the reception site 30 sends a command to the location designated by the interactive virtual object 38 to initiate some action. Actions may include linking to a Web site to display content related to the interactive virtual object 38, initiating a purchase transaction, or initiating a request for more information about the selected virtual object 38.*"; see also Hendricks column 9 lines 35-39, "*delivery of TVOMS-related subscriber-specific information and commands*"; and

receiving a response message including the object-in-content information extracted according to the basic content information included in the request message (see Hendricks column 5 lines 30-42, *"Combining these technologies, a soda can may be synthetically placed in the video, and may then be made to change over time. This placement and subsequent modification can occur at the video's source, at an intermediate point within the distribution and delivery path, or at the reception site 30. Combining the placement of virtual objects with the ability to target specific virtual objects to specific viewers or groups of viewers allows one household to see a scene with the soda can for cola, while the next door neighbor sees a root beer soda can, for example"*; see also Hendricks column 12 line 65 through column 13 line 7, *"After the reception site 30 receives and stores the virtual objects and the retrieval plan, the reception site 30 inserts those virtual objects into the appropriate virtual object locations in the content 36 based on the retrieval plan. The reception site 30 may retrieve and store only those virtual objects associated with that reception site's group assignment for that virtual object location 37"*; reception site 30 receives content including the virtual objects corresponding to the viewing information from the object delivery center 15),

wherein the received content is not received through the object-in-content information managing device (see Hendricks Figure 1; see also Hendricks column 1 line 64 through column 2 line 10, *"An object delivery center serves as a standalone or supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated"*).

**Regarding claim 13**, Hendricks teaches providing the object-in-content information included in the response message in a user-viewable format (see Hendricks column 2 lines 37-42, *"After the reception site receives and stores the virtual objects, the reception site will place the virtual objects into virtual object locations. The placement may be based on virtual objects watched data and other user information. The reception site, or terminal, will display the combined content with the overlaid or embedded virtual object."*).

**Regarding claim 15**, Hendricks teaches a system for providing object-in-content information of content (see Hendricks Abstract, *"A method and an apparatus are used to place virtual objects in video programs"*; see also Hendricks Figure 1; see also Hendricks column 1 lines 40-63, *"A system and a method delivers virtual objects to reception sites or terminals. A virtual object may be a realistic, synthetic replica of an actual object. The virtual object is viewable within video programming and may be combined with original video and audio to supplement or replace portions of the original video and audio content."*, wherein the object-in-content is the specific virtual object within the video programming), comprising:

a processing unit operable to receive the content and provide basic content information of the content (see Hendricks Figure 1; see also Hendricks column 2 lines 64-68, *"Content, virtual objects, and associated targeting/virtual object placement control can be relayed to reception sites and information extracted from the reception site. The reception site may reside within a digital cable set top box that has access to a*

*delivery network. Alternately, the reception site may be components of digital television satellite receivers. The reception site may be incorporated into the circuitry of a television, thereby eliminating the need for a separate control device attached to the television.*", wherein the reception site 30 is a processing unit operable to receive content 36; see also Hendricks column 2 lines 43-53, "*The reception site stores information indicating that a virtual object was inserted. The accumulated history information may be collected from the reception site at a later time for review purposes. The unique reception site identification information may also be provided with the collected data.*", the reception site 30 collects and provides basic content information of the content to delivery net 13); and

an object-in-content information providing unit (see Hendricks Figure 1, object delivery center 15) operable to receive a request message including the basic content information from the processing unit, and transmit a response message including the object-in-content information corresponding to the basic content information (see Hendricks column 12 lines 41-64, "*The selected virtual object locations 37 may include all virtual object locations, or a subset of all the virtual object locations. Assignment of a reception site 30 to a group for the appropriate virtual objects may be based on a detailed retrieval plan. The retrieval plan may provide information for one virtual object location 37 or multiple virtual object locations within content 36, where one or more virtual objects, target categories, and the groups to which each virtual object 38 is targeted within each virtual object location 37 is also provided. An example retrieval plan is provided in Table C below. Alternatively, the retrieval plan providing virtual object*

*assignments to virtual object locations may be sent independently from the retrieval plan providing virtual objects, target categories, and the groups to which each virtual object 38 may be targeted. Retrieval plans may be distributed along with the virtual objects and the associated content 36 directly to the reception sites by the delivery processor 1300 or using the object delivery center 15. Alternatively, a retrieval plan may be distributed by the delivery processor 1300 or using the object delivery center 15 independent of the associated content 36 or virtual objects.", the object delivery center 15 receives viewing information from the reception site 30, and transmits virtual objects corresponding to the viewing information back to the reception site 30),*

wherein the processing unit is operable to provide the object-in-content information from the object-in-content information providing unit in a user-viewable format (see Hendricks column 2 lines 37-42, "*After the reception site receives and stores the virtual objects, the reception site will place the virtual objects into virtual object locations. The placement may be based on virtual objects watched data and other user information. The reception site, or terminal, will display the combined content with the overlaid or embedded virtual object.*", wherein the reception site 30 provides virtual objects combined with content 36 in a user-viewable format), and

wherein the received content is not received through the object-in-content information providing unit (see Hendricks Figure 1; see also Hendricks column 1 line 64 through column 2 line 10, "*An object delivery center serves as a standalone or supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated*").

**Regarding claim 16**, Hendricks teaches that the content is an original content not processed with the object-in-content information or object recognition information of the content (see Hendricks Figure 1, showing original content 36 processed in operations center 10 separately from the virtual objects processed in object delivery center 15; see also Hendricks column 1 line 64 through column 2 line 10, *"An object delivery center serves as a standalone or supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated"*).

**Regarding claim 17**, Hendricks teaches that the processing unit receives the content, as original, through one network and receives the object-in-content information, modifiable, from another network (see Hendricks Figure 1, showing that the reception site 30 receives the original content 36 through the network consisting of the operations center 10 and/or local insertion center 20, and receives the virtual objects through the network consisting of object delivery center 15; see also Hendricks column 1 line 64 through column 2 line 10, *"An object delivery center serves as a standalone or supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated"*).

**Regarding claim 18**, Hendricks teaches an object-in-content information provider operable to provide the object-in-content information without changing the

content for the processing unit (see Hendricks column 1 line 64 through column 2 line 10, *"An object delivery center serves as a standalone or supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated"*; see also Hendricks column 1 lines 40-63, *"Virtual objects may be overlaid on video, partially or entirely obscuring the underlying video"*, showing that virtual objects are overlaid, not embedded or integrated, into the video).

**Regarding claim 19**, Hendricks teaches that the object-in-content information providing unit receives updated object-in-content information for the content (see Hendricks column 9 line 55 through column 10 line 10, *"Additionally, the information collected may be used to determine if the subscriber information has changed to the point that refreshed virtual objects should be delivered to a subscriber or, alternatively, whether a subscriber's group assignments should be updated"*).

**Regarding claim 20**, Hendricks teaches an apparatus for providing object-in-content information of content (see Hendricks Abstract, *"A method and an apparatus are used to place virtual objects in video programs"*; see also Hendricks Figure 1; see also Hendricks column 1 lines 40-63, *"A system and a method delivers virtual objects to reception sites or terminals. A virtual object may be a realistic, synthetic replica of an actual object. The virtual object is viewable within video programming and may be combined with original video and audio to supplement or replace portions of the original*



*video and audio content.*", wherein the object-in-content is the specific virtual object within the video programming), comprising:

a control unit operable to receive the content, provide basic content information of the content (see Hendricks Figure 1; see also Hendricks column 2 lines 64-68, *"Content, virtual objects, and associated targeting/virtual object placement control can be relayed to reception sites and information extracted from the reception site. The reception site may reside within a digital cable set top box that has access to a delivery network. Alternately, the reception site may be components of digital television satellite receivers. The reception site may be incorporated into the circuitry of a television, thereby eliminating the need for a separate control device attached to the television."*, wherein the reception site 30 is a control unit operable to receive content 36; see also Hendricks column 2 lines 43-53, *"The reception site stores information indicating that a virtual object was inserted. The accumulated history information may be collected from the reception site at a later time for review purposes. The unique reception site identification information may also be provided with the collected data."*, the reception site 30 collects and supplies basic content information of the content to delivery net 13); and

an object information interface unit operable to receive the object-in-content information corresponding to the basic content information from an object-in-content information managing device (see Hendricks column 5 lines 30-42, *"Combining these technologies, a soda can may be synthetically placed in the video, and may then be made to change over time. This placement and subsequent modification can occur at*

*the video's source, at an intermediate point within the distribution and delivery path, or at the reception site 30. Combining the placement of virtual objects with the ability to target specific virtual objects to specific viewers or groups of viewers allows one household to see a scene with the soda can for cola, while the next door neighbor sees a root beer soda can, for example"; see also Hendricks column 12 line 65 through column 13 line 7, "After the reception site 30 receives and stores the virtual objects and the retrieval plan, the reception site 30 inserts those virtual objects into the appropriate virtual object locations in the content 36 based on the retrieval plan. The reception site 30 may retrieve and store only those virtual objects associated with that reception site's group assignment for that virtual object location 37", reception site 30 receives content including the virtual objects corresponding to the viewing information from the object delivery center 15),,*

wherein the control unit provides the object-in-content information in a user-viewable format (see Hendricks column 2 lines 37-42, *"After the reception site receives and stores the virtual objects, the reception site will place the virtual objects into virtual object locations. The placement may be based on virtual objects watched data and other user information. The reception site, or terminal, will display the combined content with the overlaid or embedded virtual object."*, wherein the reception site 30 provides virtual objects combined with content 36 in a user-viewable format), and

wherein the received content is not received through the object-in-content information managing device (see Hendricks Figure 1; see also Hendricks column 1 line 64 through column 2 line 10, *"An object delivery center serves as a standalone or*

*supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated").*

**Regarding claim 21**, Hendricks teaches that the apparatus receives the content, as original, not processed with the object-in-content information or object recognition information of the content (see Hendricks Figure 1, showing original content 36 processed in operations center 10 separately from the virtual objects processed in object delivery center 15; see also Hendricks column 1 line 64 through column 2 line 10, "An object delivery center serves as a standalone or supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated").

**Regarding claim 22**, Hendricks teaches that the object information interface unit receives updated object-in-content information for the content (see Hendricks column 9 line 55 through column 10 line 10, "Additionally, the information collected may be used to determine if the subscriber information has changed to the point that refreshed virtual objects should be delivered to a subscriber or, alternatively, whether a subscriber's group assignments should be updated").

**Regarding claim 24**, Hendricks teaches that the object information interface unit transmits a message including the basic content information to obtain the object-in-content information (see Hendricks Figure 1, showing "viewing information" that equates

to the basic content information; see also Hendricks column 1 lines 59-63, "*a viewer may select an object and the selection will initiate a process whereby a reception site sends a command to a location designated by the interactive virtual object to initiate some action*"; see also Hendricks column 4 lines 47-50, "*The local data collection center 40 provides information collected from the reception site 30 to the local insertion center 20 to assist in the targeting of virtual objects*"; see also Hendricks column 5 lines 44-51, "*Virtual objects may be interactive in nature, where a viewer can select a virtual object 35 and this selection will initiate a process whereby the reception site 30 sends a command to the location designated by the interactive virtual object 38 to initiate some action. Actions may include linking to a Web site to display content related to the interactive virtual object 38, initiating a purchase transaction, or initiating a request for more information about the selected virtual object 38.*"; see also Hendricks column 9 lines 35-39, "*delivery of TVOMS-related subscriber-specific information and commands*").

**Regarding claim 25**, Hendricks teaches a method of providing object-in-content information of content, the method comprising:

receiving the content (see Hendricks column 4 lines 20-37, "*A delivery network 11 includes any of a number of different delivery systems to support the delivery of the content 36 and virtual objects from the operations center 10 and the object delivery center 15 to a local insertion center 20 or directly to a reception site 30*", the reception site 30 receives content from the delivery systems);

requesting the object-in-content information, from an object-in-content information managing device, by providing basic content information of the content (see Hendricks Figure 1, showing "viewing information" that equates to the basic content information, and "object delivery center 15" that equates to the object-in-content information managing device; see also Hendricks column 1 lines 59-63, "*a viewer may select an object and the selection will initiate a process whereby a reception site sends a command to a location designated by the interactive virtual object to initiate some action*"; see also Hendricks column 4 lines 47-50, "*The local data collection center 40 provides information collected from the reception site 30 to the local insertion center 20 to assist in the targeting of virtual objects*"; see also Hendricks column 5 lines 44-51, "*Virtual objects may be interactive in nature, where a viewer can select a virtual object 35 and this selection will initiate a process whereby the reception site 30 sends a command to the location designated by the interactive virtual object 38 to initiate some action. Actions may include linking to a Web site to display content related to the interactive virtual object 38, initiating a purchase transaction, or initiating a request for more information about the selected virtual object 38.*"; see also Hendricks column 9 lines 35-39, "*delivery of TVOMS-related subscriber-specific information and commands*";

receiving, from the object-in-content information managing device, the object-in-content information extracted according to the basic content information (see Hendricks column 5 lines 30-42, "*Combining these technologies, a soda can may be synthetically placed in the video, and may then be made to change over time. This placement and*

*subsequent modification can occur at the video's source, at an intermediate point within the distribution and delivery path, or at the reception site 30. Combining the placement of virtual objects with the ability to target specific virtual objects to specific viewers or groups of viewers allows one household to see a scene with the soda can for cola, while the next door neighbor sees a root beer soda can, for example"; see also Hendricks column 12 line 65 through column 13 line 7, "After the reception site 30 receives and stores the virtual objects and the retrieval plan, the reception site 30 inserts those virtual objects into the appropriate virtual object locations in the content 36 based on the retrieval plan. The reception site 30 may retrieve and store only those virtual objects associated with that reception site's group assignment for that virtual object location 37", reception site 30 receives content including the virtual objects corresponding to the viewing information from the object delivery center 15); and*

*providing the received object-in-content information in a user-viewable format (see Hendricks column 2 lines 37-42, "After the reception site receives and stores the virtual objects, the reception site will place the virtual objects into virtual object locations. The placement may be based on virtual objects watched data and other user information. The reception site, or terminal, will display the combined content with the overlaid or embedded virtual object.", wherein the reception site 30 provides virtual objects combined with content 36 in a user-viewable format),*

*wherein the received content is not received through the object-in-content information managing device (see Hendricks Figure 1; see also Hendricks column 1 line 64 through column 2 line 10, "An object delivery center serves as a standalone or*

*supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated").*

**Regarding claim 26**, Hendricks teaches that the receiving the content includes receiving the content, as original (see Hendricks Figure 1, showing original content 36 processed in operations center 10 separately from the virtual objects processed in object delivery center 15; see also Hendricks column 1 line 64 through column 2 line 10, *"An object delivery center serves as a standalone or supplemental system to the operations center to deliver virtual objects independently of the video with which the virtual objects are to be associated"*), and the requesting of the object-in-content information includes obtaining the basic content information of the original content (see Hendricks Figure 1, showing "viewing information" that equates to the basic content information).

**Regarding claim 27**, Hendricks teaches that the receiving the object-in-content information includes receiving updated object-in-content information corresponding to the basic content information of the content (see Hendricks column 9 line 55 through column 10 line 10, *"Additionally, the information collected may be used to determine if the subscriber information has changed to the point that refreshed virtual objects should be delivered to a subscriber or, alternatively, whether a subscriber's group assignments should be updated"*).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4, 5, 9, 14, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks (US 7,743,330) *supra*, and Astiz et al. (hereinafter Astiz), United States Patent 5,918,012.

**Regarding claim 4**, Hendricks teaches every limitation of claim 4 except that the basic content information comprises one of actual coordinates, a click time, a channel number, or a combination thereof. Hendricks teaches that the virtual objects have assigned locations (see Hendricks column 12 lines 41-64, *"The selected virtual object locations 37 may include all virtual object locations, or a subset of all the virtual object locations. Assignment of a reception site 30 to a group for the appropriate virtual objects*



*may be based on a detailed retrieval plan. The retrieval plan may provide information for one virtual object location 37 or multiple virtual object locations within content 36, where one or more virtual objects, target categories, and the groups to which each virtual object 38 is targeted within each virtual object location 37 is also provided.”), may be limited spatially and/or temporally within the video program (see Hendricks column 1 lines 40-63, “Overlaid objects may be limited spatially to a fixed portion of the video screen, limited temporally to a given time for display, limited by a combination of both location and time, or tied to a spatially changing portion of the screen that is moving with time.”), and may be selected by the user to get more information (see Hendricks column 5 lines 44-51, “Virtual objects may be interactive in nature, where a viewer can select a virtual object 35 and this selection will initiate a process whereby the reception site 30 sends a command to the location designated by the interactive virtual object 38 to initiate some action. Actions may include linking to a Web site to display content related to the interactive virtual object 38, initiating a purchase transaction, or initiating a request for more information about the selected virtual object 38.”). However, Hendricks does not **explicitly** teach that the basic content information comprises actual coordinates, click time, and/or channel number. Astiz teaches a similar invention where the user clicks on an object on screen to retrieve further information relating to that object. When the user selects an object in Astiz, actual coordinates and click time are provided to determine which virtual object the user selected in the video program (see Astiz column 6 line 64 through column 7 line 18, “when the user points the pointing device at a particular portion of the video playing on the viewer screen 41 of the viewer*

31 ("selection" in FIG. 3), the viewer 31 sends so-called (x,y,t) data to the browser 32 for processing into a URL code. Typically when a user positions a computer pointing device at a portion of a browser screen (such as text or a still image) the browser uses the X and Y coordinates of the pointing device to determine that the user has requested additional data originating at a particular URL location. With the viewer 31 of the present invention, however, the video pictures are moving and changing over time causing the X and Y coordinate system to be insufficient for user selections of time-based data files. This happens, for example, because a screen which is showing one subject matter at one moment (on which the user may wish to click and move to a data file related to that particularly displayed subject matter) will be different than the video display on the viewer screen 41 that occurs sometime after the original display. As a result, the user who clicks on an X-Y coordinate at time  $t.sub.0$  will be clicking on a different picture (or text) than if the user clicks at the exact same X-Y coordinates at a later time  $t.sub.1$ ."). It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide actual coordinate data and/or click time data with the user request message as taught by Astiz in the invention of Hendricks so that the system can determine which virtual object the user is requesting data for when there is more than one interactive virtual object displayed on the screen (as shown in Hendricks Figure 2).

**Claim 5** recites an apparatus having substantially the same limitations as the apparatus of claim 4. Therefore, claim 5 is rejected under the same rationale.

**Claim 9** recites a system having substantially the same limitations as the apparatus of claim 4. Therefore, claim 9 is rejected under the same rationale.

**Claim 14** recites a method having substantially the same limitations as the apparatus of claim 4. Therefore, claim 14 is rejected under the same rationale.

**Claim 23** recites an apparatus having substantially the same limitations as the apparatus of claim 4. Therefore, claim 23 is rejected under the same rationale.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Tomsen et al. (US 2002/0054091) Method and system to defer transactions conducted via interactive television
- Chapin et al. (US 2002/0069405) System and method for spokesperson interactive television advertisements
- Holtz et al. (US 2003/0001880) Method, system, and computer program product for producing and distributing enhanced media
- Wakefield (US 7,162,696) Method and system for creating, using and modifying multifunctional website hot spots

- Billmaier (US 7,237,252) Method and apparatus to invoke a shopping ticker

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN ALVESTEFFER whose telephone number is (571)270-1295. The examiner can normally be reached on Monday-Friday 10:00AM-6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chat Do can be reached on (571)272-3721. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Stephen Alvesteffer  
Examiner  
Art Unit 2171

/S. A./  
Examiner, Art Unit 2171

Application/Control Number: 10/748,167  
Art Unit: 2171

Page 36

/Chat C. Do/  
Supervisory Patent Examiner, Art Unit 2171

/Wendy Garber/  
Director, Technology Center 2100